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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,765	12/01/2006	Jin-Xing Li	WSAG0107PUSA	4667

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EXAMINER	
LANGMAN, JONATHAN C	
ART UNIT	PAPER NUMBER
1794	

MAIL DATE	DELIVERY MODE
12/24/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,765	LI ET AL.	
	Examiner	Art Unit	
	JONATHAN C. LANGMAN	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *47-66* is/are pending in the application.

4a) Of the above claim(s) *47-63* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *64-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/22/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group II, claims 64-66, in the reply filed on December 12, 2009 is acknowledged. -

Claims 47-63 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 12, 2009.

On a side note, the examiner would like to note that group II inadvertently included a claim 67 in the restriction set forth on November 9, 2009. Group II, should have only included claims 64-66, as presented by the applicant.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 64-66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 64 sets forth two "LTO" layers. LTO is a term in the art that is understood to mean "Low Temperature Oxide", the term "low" is a relative term that would render the claim indefinite, since it is unclear what temperatures that the descriptive term "low" would encompass.

Further in regards to claim 64, the applicant sets forth that the two respective layers are low stress and high stress. These terms are relative descriptive terms that do not provide any quantification of stress. What is considered high stress? What is considered low stress? If two oxide layers in the art have the same stress, could one be considered "low" to one routineer in the art, and the other layer referred to as "high" to another routineer in the art. The broad relative terminology renders the claim indefinite.

Claims 65 and 66 are rejected for being dependent upon a base rejected claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 64-66 are rejected under 35 U.S.C. 102(b) as being anticipated by Korman et al. (US 5,234,851).

Korman et al. teach a substrate having first and second sides. Upon a first side of the substrate is deposited a low temperature oxide layer, 160. A second layer of low temperature oxide, 162, is deposited on the first low temperature oxide layer (col. 8, lines 46-68, and Figure 2p).

Korman et al. are silent to the respective stress of these layers; however, the applicant only claims the respective stresses in relative, undefined terms of "low" and "high", in which as presented in the claims are not even relative to one another. The two

low temperature oxide layers, 160, and 162, of Korman will have some degree of film stress. Since the applicant claims the amounts of stress in undefined mounts, it is the examiners position that any stresses will read on the claims as presented, especially since the claimed stresses are not even relative to one another. Depending upon their context that these stress layers are measured in, these layers of Korman could be construed as the first layer being a "low" undefined stress, and the second layer being a "high" undefined stress.

The limitation of a "backside sealable wafer structure" is a descriptive term which does not provide any structural limitations to the wafer instantly claimed. Furthermore these limitations do not even provide that the LTO layers seal the backside of a wafer, instead these limitations only set forth that two oxide layers are formed on a wafer, and the wafer is capable of being sealed (sealable). Even furthermore, while there is no disclosure that the oxide layers of Kroman form a backside sealable structure as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists,

does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose, i.e. a backside sealable wafer structure, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art structure and further that the prior art structure which has an identical structure to that set forth in the present claims is capable of performing the recited purpose or intended use.

Regarding claims 65 and 66, as seen in Figure 2P, the two oxide layers, 160, and 162, are formed over layer 132, which is a polysilicon layer. This polysilicon layer, 132, is located between the two oxide layers and a N+ substrate (Figure 2P, col. 5, lines 56-62).

Claims 64 and 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Takimazawa et al. (US 5,998,283).

Takimazawa et al. teach a silicon wafer with either p-type or n-type conductivity (col. 6, lines 50-57) which is coated with a low temperature oxide as seen in figure 2 (col. 5, lines 63). Figure 2 shows that the coating results in a multilayer structure with alternating layers of amorphous Si transitioning to substoichiometric SiO_x and then finally transitioning to SiO_2. The varied concentrations of oxygen will result in a variance in stress. The roller coastering effect of the concentration of oxygen will necessarily

result in a multilayer structure of LTO that comprises high stress transitioning to low stress.

The structure as taught by Takimazawa forms a backside sealable wafer structure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN C. LANGMAN whose telephone number is (571)272-4811. The examiner can normally be reached on Mon-Thurs 8:00 am - 6:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCL

/Timothy M. Speer/
Primary Examiner, Art Unit 1794